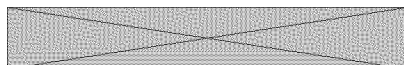


**To:** Horn, Chris (FHWA)[Chris.Horn@dot.gov]  
**From:** Henderson - CDOT, Vanessa  
**Sent:** Wed 11/23/2016 8:45:51 PM  
**Subject:** Fwd: I-70 East Air Quality  
[LaCasaPM10 Daily and Continuous 2013-2015.pdf](#)  
[Globeville Hourly PM10 PM25 10-2015 9-2016.pdf](#)  
[Denver PM10 PM25 2006-2015.xlsx](#)

**Vanessa Henderson**  
**I-70 East Environmental Manager**



**P 303.512.5902**  
**2000 South Holly Street**  
**I-70 East Project Office**  
**Denver, CO 80222**

[vanessa.henderson@state.co.us](mailto:vanessa.henderson@state.co.us) | <https://www.codot.gov/> | <http://www.i-70east.com/>

----- Forwarded message -----

**From:** Pierce - CDPHE, Gordon <[gordon.pierce@state.co.us](mailto:gordon.pierce@state.co.us)>  
**Date:** Wed, Nov 23, 2016 at 1:41 PM  
**Subject:** Re: I-70 East Air Quality  
**To:** "Henderson - CDOT, Vanessa" <[vanessa.henderson@state.co.us](mailto:vanessa.henderson@state.co.us)>

Vanessa,

Sorry for the delay. I have had staff look at the data and site locations and we are having a hard time justifying the use of the La Casa site for background PM10 concentrations, even though the site is closer to the Globeville-Elyria-Swansea (GES) area. The primary issues are:

1. La Casa is located on a little higher terrain outside of the Platte Valley, so wind flows related to sources can be different versus the Alsup/Commerce City site.
2. La Casa has little to no significant industrial activity nearby whereas the GES area does have nearby industrial activity, including Purina, Metro Denver Wastewater, Suncor Refinery and Xcel Cherokee. Alsup/Commerce City is downwind of these sources as well, so it better reflects the GES area.
3. The GES area has impacts from both I-25 and I-70, including the "mousetrap". Due to its topographically higher location to the west and wind patterns (see wind roses in our Annual Data Reports that show a predominant SW component) we do not believe that La Casa is fully picking up all the impacts from the existing highways.

We have looked at the continuous PM10 data from the near-road Globeville site at I-25 and 49th Avenue as well made comparisons to other sites. For Oct. 2015 - Sep. 2016, the Globeville 1st

max 24-hour concentration at local temperature and pressure (LTP) conditions is 93 ug/m<sup>3</sup>, the 2nd max is 87 ug/m<sup>3</sup>. For standard temperature and pressure (STP) conditions to directly compare the the PM10 NAAQS, these concentrations would be roughly 20% higher, or about 110 and 105 ug/m<sup>3</sup> respectively. So, the Globeville location is much more comparable to what was seen at Alsup/Commerce City. (Note: as these values are not from a reference or equivalent analyzer, we are reporting what comes from the instrument, which is at LTP, not STP conditions.) These data are in an attached file.

I don't know how the Federal Highways calculations work, but keep in mind as well that the La Casa site operates every 3rd day, not every day, so that would also affect the values used.

I have attached the La Casa data for 2013-2015, as requested, including the 24-hour FRM every 3rd-day and the hourly data. Note that the hourly data were initially from a TEOM (which is an equivalent analyzer with data at STP), but changed to a GRIMM analyzer (which is not an equivalent analyzer so data are at LTP) in March 2015.

In regards to meteorological data, the Stapleton data would be more appropriate to use as the La Casa data do not have all the needed parameters. Stapleton is the best dataset we have for the area.

For staff, you are correct:

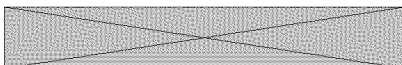
Dale is MOVES  
Emmett is met data  
Paul is the transportation liaison  
Nancy is the monitoring/background data

Let me know if you want to discuss this further.  
Gordon

On Thu, Nov 17, 2016 at 5:21 PM, Henderson - CDOT, Vanessa  
<[vanessa.henderson@state.co.us](mailto:vanessa.henderson@state.co.us)> wrote:

Perfect - thanks so much! Good luck with the SIP hearings!

**Vanessa Henderson**  
**I-70 East Environmental Manager**



**P 303.512.5902**  
**2000 South Holly Street**  
**I-70 East Project Office**  
**Denver, CO 80222**

On Thu, Nov 17, 2016 at 1:07 PM, Pierce - CDPHE, Gordon <[gordon.pierce@state.co.us](mailto:gordon.pierce@state.co.us)> wrote:

Vanessa,

Yes, I did get your voicemail. I already have staff looking at it and will add in your other requests. It may be Monday before we get back to you as we have our Ozone SIP hearing going on today and tomorrow.

Gordon

On Thursday, November 17, 2016, Henderson - CDOT, Vanessa <[vanessa.henderson@state.co.us](mailto:vanessa.henderson@state.co.us)> wrote:

Hi Gordon -

I left you a voicemail at the end of the day yesterday and wanted to follow-up on that because FHWA just had another call with EPA this morning. EPA has indicated that they would be okay with us switching background monitors from the old Commerce City monitor to the newer La Casa monitor as long as APCD is okay with it. If you're able to confirm that APCD is okay with it, that'd be great. Here's the information that we provided to EPA about why the La Casa monitor would be better for this project (as a refresher for you from the recent Cooperating Agency meeting).

At the time we began development of the air quality protocol for the I-70 East project in the summer of 2012, the La Casa site was not yet in operation, and we selected from the existing nearby monitors with 3 years of PM10 data (CAMP, Commerce City, and Welby) as potential sources of background concentrations. However, as we noted in the protocol, it may also be appropriate to use a different monitor, or interpolate between these and/or another monitor.

The La Casa site began operation 9/27/2012, and it now has 3 complete years of PM10 data (2013-2015). It is located approximately 3/4 mile west of the I-25 interchange, which has the highest modeled concentrations (excluding background) anywhere along the project. (The Commerce City site ceased operation in 2015, so 2012-2014 data are the most recent available from this site, and it is located over 4 miles northeast of the I-25 interchange.) In addition to the La Casa data being newer and closer, APCD has indicated verbally that this monitor is more reflective of land use in the project area, and would provide a more representative background concentration than the Commerce City site that we are currently using. This in turn would result in more accurate design values for the PM10 conformity and NEPA analyses.

We propose to use this site as the source of background data for the revised PM10 hotspot analysis and conformity determination to be released for public review later this month. We would like to request your assistance in calculating the applicable 2013-2015 background value from this site (considering data completeness, as well as the multiple samplers present

at this location). We will also prepare a technical justification for using this site as a source of background data (in consultation with APCD), addressing the factors outlined in section 8.3.1 of the PM hotspot guidance.

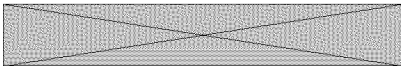
Also, EPA has requested the data from the La Casa monitor in order to help us determine the appropriate background concentration to use. So, I was hoping that you or one of your staff would be able to provide that information to me for them. I think I can pull it from your website, but it'd make me feel better getting the data from you guys just in case I didn't pull the right stuff.

Is there anything else that we'd need from you guys in order to proceed with the La Casa monitor that I haven't noted? I'm wondering if our Stapleton met data set is still the appropriate set of met data or if Emmett would need to get us new met data. Also, anything else you guys can think of would be great to know.

Feel free to give me a call if you want to discuss anything or add whoever you think should be included from your group to this email. I'm not sure of everyone's roles still (I think Dale is MOVES, Emmett is met data, and Paul is the transportation liaison, but not sure of anyone else), so I figured I'd just start with you and go from there. As I'm sure you're aware, we're very tight on time (still need to get the conformity out for agency/public review at the beginning of December), so if you're able to get back to me pretty quickly, I'd really appreciate it.

Thanks in advance for your help with this!  
Vanessa

**Vanessa Henderson**  
**I-70 East Environmental Manager**



**P 303.512.5902**  
**2000 South Holly Street**  
**I-70 East Project Office**  
**Denver, CO 80222**

vanessa.henderson@state.co.us | <https://www.codot.gov/> | <http://www.i-70east.com/>

Gordon Pierce  
Program Manager  
Technical Services Program

P 303.692.3238 | F 303.782.5493

4300 Cherry Creek Drive South, Denver, CO 80246-1530

[gordon.pierce@state.co.us](mailto:gordon.pierce@state.co.us) | [www.colorado.gov/cdphe/apcd](http://www.colorado.gov/cdphe/apcd)

--  
  
Gordon Pierce  
Program Manager  
Technical Services Program

P 303.692.3238 | F 303.782.5493

4300 Cherry Creek Drive South, Denver, CO 80246-1530

[gordon.pierce@state.co.us](mailto:gordon.pierce@state.co.us) | [www.colorado.gov/cdphe/apcd](http://www.colorado.gov/cdphe/apcd)